

COMMONWEALTH OF PENNSYLVANIA



OFFICE OF CONSUMER ADVOCATE

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January 19, 2000

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Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 12th Street, S. W.
Washington, DC 20554

In the matter of: Common Carrier
Bureau Seeks Comment On Requests
to Redefine "Voice Grade Access"
for Purpose of Federal Universal
Service Support
CC Docket No. 96-45
DA 99-2985

Dear Ms. Salas:

Enclosed please find an original and four copies of the Office of the Pennsylvania Consumer Advocate's Comments in the above-referenced matter. Please also note that these Comments have been filed with the Commission electronically.

Please indicate your receipt of this filing on the additional copy provided and return it to the undersigned in the enclosed self-addressed, postage prepaid, envelope. Thank you.

Sincerely yours,

Philip F. McClelland
Senior Assistant Consumer Advocate

Enclosure

cc: Al McCloud, Network Services Division

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**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION**

In the Matter of

**Common Carrier Bureau Seeks Comment On
Requests To Redefine "Voice Grade Access"
For Purpose Of Federal Universal Service
Support**

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**COMMENTS OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE**

I. Introduction

The Pennsylvania Office of Consumer Advocate ("OCA") hereby submits these Comments in support of the Petitions for Reconsideration filed on February 12, 1998 by the North Dakota Public Service Commission, the South Dakota Public Utilities Commission and the Washington Utilities Commission as well as the *Ex Parte* Presentation on January 27, 1998 made by the Rural Utilities Service (collectively referred to as the "Petitions for Reconsideration")¹ that ask the Federal Communications Commission ("Commission" or "FCC") to redefine "voice grade access" in Section 54.101 of the Commission's universal service rules. See, 47 C.F.R. §54.101, infra. The OCA is designated by Pennsylvania state law to represent public utility consumers before the Pennsylvania Public Utility Commission, federal agencies and state and federal courts. The OCA is actively involved in representing consumer interests in telecommunications issues in these

¹ See, CC Docket Nos. 96-45, 96-262, 94-1, 91-213 and 95-72 (Feb. 12, 1998) and *Ex Parte* Presentation of the Rural Utilities Service, dated January 27, 1998.

venues including issues involving universal service and broadband high-speed voice and data transmission.

The OCA submits these Comments in support of the Petitions for Reconsideration which ask the FCC to redefine voice grade access in Section 54.101 of the FCC's universal service rules to establish the bandwidth of, at a minimum, 300 Hz to 3,500 Hz. Section 54.101 requires that, in order to be eligible for universal service support, a carrier must offer voice grade access to the public switched network, at a minimum, at 300 to 3,000 Hz. 47 C.F.R. §54.101. Therefore, the Petitions for Reconsideration request that the bandwidth provided in the definition of voice grade access for purposes of universal service support be increased so that areas receiving universal service support have a guarantee of greater capacity through which to receive additional services over the public switched telephone network. In its Public Notice of December 22, 1999, the FCC specifically seeks comments on, *inter alia*, how to ensure that consumers and carriers in rural areas are not adversely affected if the Commission modifies the voice grade bandwidth requirement and whether certain rural carriers may become ineligible to receive universal service support as a result of the suggested revision. Id at 2-3.

In support of the Petitions for Reconsideration that request Section 54.101 be revised to expand the bandwidth requirement for voice grade access to a minimum definition of 300 Hz to 3,500 Hz, the OCA files these Comments to submit that this bandwidth requirement should be expanded so that rural customers can have the same access to telecommunication and information services and technologies as urban and suburban customers.

II. Summary

The Telecommunications Act of 1996 explicitly requires that consumers in rural, insular and high cost areas have access to telecommunications and information services that are reasonably comparable to those available in urban and suburban areas at comparable rates. In the FCC's rules, however, the universal service support mechanism is only required to support voice grade access to the public switched network with bandwidths of 300 to 3,000 Hz. This requirement is contrary to the FCC's prior approval of the recommendation of the Joint Board that voice grade service be at a frequency of 500 to 4,000 Hz. Furthermore, a voice grade access definition with bandwidth of 300 to 3,000 Hz denies rural telephone customers of reasonably comparable services due to the limitations inherent in copper loops that extend beyond 18,000 feet from the switch where some rural customers are located. This limitation denies some rural customers access to telecommunication and information technologies and services, such as adequate access to the Internet, telecommuting, distance education and access to medical specialists, that suburban and urban customers readily receive. Therefore, the current definition of voice grade access is inconsistent with the Act of 1996 and should be revised.

The OCA supports the revision of the definition of voice grade access to include bandwidths of 3,500 Hz or higher so that rural customers can receive comparable services and rates as suburban and urban customers implemented through a reasonable phase-in of upgrades to current local exchange company switching technology.

III. Comments

A. The Federal Universal Service Fund Is Designed To Ensure All Americans Comparable Access To The Public Switched Telephone Network At Comparable Rates.

In the Telecommunications Act of 1996 (TA96), Congress directed the FCC and the states to take the steps necessary to establish explicit support mechanisms to ensure the delivery of affordable telecommunications service to all Americans while opening the telecommunications markets to competition. Prior to TA96, consumers in high cost and rural areas of the nation received universal service support through interstate and intrastate rates so that those customers are not forced to pay prohibitively high rates in order to obtain telephone service. Section 254(b)(3) of TA96 codifies the FCC's long-standing commitment to ensuring universal service and directs that "consumers ... in rural, insular, and high cost areas should have access to telecommunications and information services ... that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to [those] in urban areas." 47 U.S.C. §254(b)(3). The universal service program has benefitted all telephone subscribers throughout the country by helping to ensure that all Americans are connected to the network and, therefore, telephonically accessible to one another.

Today, with the advent of new communications and information technologies, however, access to the public switched telephone network also provides additional benefits through the use of a modem so that computers can connect to each other and transmit information over telephone lines. As the Rural Utilities Service ("RUS") pointed out in its *Ex Parte* filing and as discussed below, telecommunications frees the rural population from the limitations of time and space. Ex Parte Presentation of the Rural Utilities Service at 1. In order for the public switched

telephone network to be able to free the rural population from these limitations and allow rural customers to benefit from the use of new communications and information technologies and services, telecommunications carriers must provide access to the network at such levels that will allow for these technologies to work.

Section 54.101 of the Commission's universal service rules provides:

(a) *Services designated for support.* The following services or functionalities shall be supported by Federal universal service support mechanisms:

(1) *Voice grade access to the public switched telephone network.* "Voice grade access" is defined as a functionality that enables a user of telecommunications services to transmit voice communications, including signaling the network that the caller wishes to place a call, and to receive voice communications, including receiving a signal indicating there is an incoming call. For purposes of this part, bandwidth for voice grade access should be, at a minimum 300 to 3,000 Hz.

54 C.F.R. §54.101. This requirement is intended to allow rural telephone customers the ability to use the public switched telephone network for the same purposes and to the same benefit as suburban and urban telecommunications customers who are in more densely populated areas where the infrastructure is such that greater bandwidth capacity can be provided at lower costs. As explained below, this provision fails to do so to the extent the bandwidth is not expanded beyond the present limits.

- B. A Voice Grade Definition of Only 3,000 Hz Does Not Ensure All Americans Comparable Access To The Public Switched Telephone Network At Comparable Rates.

The OCA submits that the provision of telecommunications service to rural customers through the use of a universal service mechanism that allows for bandwidth as low as 3,000 Hz is antithetical to the provisions of TA96. For example, modem speeds of 28.8 kilo-bits per second (“Kbps”) is the bare minimum for today’s practical computing purposes when downloading large files or graphics that suburban and urban customers can do with ease at higher modem speeds over the public switched telephone network due to their proximity to the switch. The OCA submits that this is particularly troublesome as rural customers have, perhaps, the most to gain through the advances in telecommunications and information technology and services such as telecommuting, distance education and access to medical specialists that were otherwise unavailable to rural customers before the universal service standards were originally established. These services have become essential human services that are commonplace in today’s society.

The Petitions for Reconsideration also contend that the bandwidth established in the current definition of voice grade access is insufficient to provide rural customers with the opportunity to reap the benefits of today’s telecommunications and information technologies and services. The OCA further submits that most home computer users today are equipped with modems with a capability of data transmission at a rate of at least 28.8 Kbps. This is significant because a loop that is limited to only 3,000 Hz will cause a 28.8 Kbps speed modem to operate at a significantly lower speed than one that will allow higher frequencies, all other factors being the same. RUS notes that a 3,400 Hz circuit will not guarantee that a modem will connect at 28.8 Kbps, but that a 3,000 Hz circuit will practically guarantee that the modem will not connect at that speed. Ex Parte Presentation at 3. Therefore, the reduced bandwidth requirement for voice grade access will hurt rural consumers.

The Petitions for Reconsideration recognize that the use of 3,000 Hz will have an adverse effect on the service in rural areas because rural loops have a limited bandwidth since performance of copper loops declines as the distance of the loops decrease² Petition for Reconsideration of the Washington Utilities and Transportation Commission at 2, and the amplification of bandwidth at the end of the local loop is cost prohibitive due to the lower population density in those areas. The Petitions for Reconsideration further recognize that this reduction to 3,000 Hz, along with longer rural loops, will slow down rural area customers' access to technology, such as the Internet, because 3,000 Hz does not provide comparably adequate service to subscribers in rural areas as it does for subscribers in urban and suburban areas. Id. Therefore, rural customers will be denied some of the important services suburban and rural customers are afforded. The OCA submits that the same quality of service should be available to rural customers at the end of an 18,000 foot loop as is available to urban and suburban customers who are closer to the switch since the FCC agreed to 18,000 feet as the length of the local loop in determining universal service support in high cost areas.

OCA does not suggest that all rural customers are served over copper loops longer than 18,000 feet. In fact, many carriers have already begun modernizing their rural territories by reducing copper loop lengths and installing Carrier Serving Area (CSA) network architectures so that copper loop lengths are reduced. CSA technology is a cost effective means of constructing

² The FCC has previously concluded, in adopting its model platform for use in determining universal service support in high cost areas, that the universal service mechanism should assume a maximum copper loop length of 18,000 feet because that length would support the appropriate quality levels the services eligible for universal service support. In the Matter of Forward-Looking Mechanism for High Cost Support for Non-Rural LECs, Fifth Report and Order, CC Docket No. 97-160, at ¶70 (released October 28, 1998).

networks and will necessarily reduce the extent to which a revision in universal service bandwidth requirements will force any change in network construction. Nonetheless, all customers that are benefitted by universal service support should be assured of a 300 Hz to 3,500 Hz bandwidth.

The OCA further submits that the RUS, an organization that seeks to provide telecommunications service that is comparable to the urban and suburban customers' service, also notes that rural America needs modern telecommunications to bring high quality education, health care, and commerce to rural families and businesses. Ex Parte Presentation of the Rural Utilities Service at 1. RUS recognizes that the overriding issue is the health, education and economic condition of all of rural America. Additionally, the National Association of Regulatory Utility Commissioners ("NARUC"), in its March 18, 1998 Resolution, also recognized that the smaller bandwidth will have an adverse effect on service in rural areas. Resolution on Definition of Voice Grade Service for Universal Service Purposes, adopted by the National Association of Regulatory Utility Commissioners, March 18, 1998. The NARUC Resolution further acknowledges that a bandwidth of approximately 3,000 Hz will not allow rural subscribers to receive the same level of service, such as modem speeds, as urban and suburban subscribers, which is inconsistent with Section 254(b) of the Act of 1996. Id. Therefore, NARUC also recommends the implementation of a 3,500 Hz bandwidth standard be used in the definition of voice grade access and that such a standard be established in a phase-in manner. Id. The OCA submits there is substantial support for the FCC revising its definition of voice grade access to include 3,500 Hz or higher.

The OCA recognizes that such a revision, as requested in the Petitions for Reconsideration, could cause some local exchange companies to incur additional costs to make the required changes. Therefore, OCA agrees with the Petitions' allowance of a reasonable time period

for the transition to be implemented. The OCA recognizes that there presently exists some limited plant in service that can provide a bandwidth of only 3,000 Hz and that there will be costs incurred to local exchange companies for upgrading and modernizing their plant to be able to accommodate 3,500 Hz or more. Therefore, the OCA concurs with the recommendation in the Petitions for Reconsideration that there be a phase-in from the 3,000 Hz to the 3,500 Hz bandwidth over a reasonable period of time. This phase-in is necessary so as not to deny support to carriers who have to build or modify plant to meet the 3,500 Hz bandwidth.

C. Conclusion

In conclusion, the effect of Section 254(b)(3), of ensuring that customers in rural, insular, and high cost areas should have access to telecommunications and information services that are reasonably comparable to those services provided in urban areas and at comparable prices, is not being satisfied due to the modification of the definition of the voice grade access bandwidth requirement. The current required bandwidth, which will affect primarily rural copper plant, could be a permanent barrier between rural subscribers and the important frequencies above 3,000 Hz that provide essential human services that are commonplace in today's society. Regardless of the transition time period, however, the OCA submits that this is a revision that needs to be made. Therefore, the OCA supports the revision of the definition of voice grade access under Section 54.101 of the Code of Federal Regulations to include a bandwidth minimum of 3,500 Hz or higher so that rural Americans can have access to telecommunications and information technologies and services that are reasonably comparable to those services provided in urban and suburban areas at rates that are reasonably comparable. The OCA submits that such a revision is required by the federal Telecommunications Act of 1996.

IV. Conclusion

The Pennsylvania Office of Consumer Advocate requests the Federal Communications Commission to review these Comments as it considers what action to take concerning the Petitions for Reconsideration filed by the North Dakota Public Service Commission, the South Dakota Public Utilities Commission and the Washington Utilities Commission as well as the *Ex Parte* Presentation of the Rural Utilities Service. The OCA further requests that the FCC revise the definition of voice grade access to include a bandwidth minimum of 3,500 Hz or higher so that rural Americans can have access to telecommunications and information technologies services that are reasonably comparable to those services provided in urban and suburban areas at rates that are reasonably comparable as required by the federal Telecommunications Act of 1996.

Respectfully submitted,



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Dated: January 19, 2000

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In the Matter of	:	
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Common Carrier Bureau Seeks Comment On	:	CC Docket No. 96-45
Requests To Redefine "Voice Grade Access"	:	
For Purpose Of Federal Universal Service	:	DA 99-2985
Support	:	

I hereby certify that I have this day served a true copy of the foregoing document,
Office of Consumer Advocate's Comments, upon parties of record in this proceeding.

Dated this 19th day of January, 2000.

Respectfully submitted,



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